inbound logistics
a THOMAS™ company

One key step to finding answers to any logistics, supply chain, or technology challenge is knowing the right questions to ask.

Inbound Logistics assembled a team of supply chain and logistics technology leaders, and asked for their perspectives on the most pressing logistics challenges and opportunities impacting your business.

More importantly, these logistics thought leaders can give you guidance when considering improvements to your business processes.

Thought Leaders

Agility, Data, and No-Code: Three Trends for the Future

Q: *How are new technologies shaping the future of the supply chain?*

A: Advances in data integration, IoT, machine learning, and artificial intelligence are changing every part of the supply chain. These technologies can link systems and enable you to:

■ Deliver better customer experiences with end-to-end order data and item status from multiple systems.

■ Automate changes in store allocation based on real-time consumer behavior and inventory.

■ Dynamically reallocate warehouse resources based on capacity and inbound sensor data.

Adopting these technologies will bring new ways of solving problems and require new capabilities.

Q: *What is the best way for organizations to take advantage of these technologies?*

A: Putting these new technologies into action goes beyond just installing them. Here are three trends that can shape how organizations can make the most of these advances:

Agility — *flexibility for your teams and processes*. Agile tools and agile planning can help teams manage and maintain control in changing environments. Organizational approaches like the Composable Enterprise can create core business capabilities instead of outcomes. This agility is key in allowing teams to execute locally, in real-time, while staying in sync with the enterprise.

Data — *integrating and putting data into action*. Ever-increasing volumes and variety of data are being generated across the supply chain. Teams at every stage of the process need access to this data to gain visibility and act. New technologies such as artificial intelligence require this data to predict and prevent. Tools that map data to universal business concepts while maintaining data integrity, like those included in the UCBOS platform, can meet this complex challenge and ensure that every part of the organization can rely on the data.

No-code — *enabling distributed teams to quickly create tailored workflows and tools with enterprise readiness*. No-code is an emerging technology to let end users create workflows and applications using re-usable components. This approach is much faster than traditional development or customizing existing applications. Moreover, it does not require critical technology resources. No-code systems that are paired with data integration tools, like the no-code platform UCBOS provides, can enable operational teams to create applications, automate critical business functions, and speed the adoption of new technology.

Q: *What is the impact of following these trends?*

A: Organizations that implement new technology with agility, data, and no-code will be able to amplify supply chain performance, alleviate risks, and predict outcomes today while laying the groundwork for the supply chain of the future.

UCBOS is a no-code platform to automate critical operations across the supply chain. Join the conversation on the key trends in supply chain—visit UCBOS.com. Join our webinar February 25, 2021, with seasoned supply chain professionals, as we continue our discussion on Agility, Data, and No-Code.

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Scaling SCM Ecosystems— Boardroom Insights

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Q: *Can you reflect on your last customer transformation experience and the takeaways from that engagement?*

A: Modernizing ecosystems while keeping up the ongoing business operations is the reality of every business. The current ecosystem, future solution expectations, and resource models are the drivers that determine the program's pace.

Practical challenges in the transformation include:

■ Acquiring an explicit agreement, understanding, and alignment of the various systems, modules, and services supporting the business well, what systems must go, and the prioritized, critical, and nice-to-have are the crucial plan necessities.

■ Assessing the existing ecosystems and solution footprint gives you an idea of solution complexity. The landscape of non-integrated solutions and numerous technology stacks has the risk of overhead. Building consensus in these areas is a big win for the project.

Q: *Do you have practical recommendations for a successful transformation?*

A: Focus on identifying core systems that must be changed. Major business system replacements always pose a substantial risk, but your business can mitigate risks in many ways, and the results are gratifying. Another approach is to start with peripheral systems and work toward the core systems. It is undoubtedly the lower risk and makes smaller wins.

A practical approach is identifying and beginning with the most troublesome areas with the most significant pain points. Little wins help the team show progress, increase visibility, and increase the organization's support of the project and the team's ability to build on experience.

Irrespective of the approach that we take, change happens, and it is imperative to avoid forcing old processes into a new system as it stretches the timelines, creates gaps, and works against you.

Q: *Often overlooked, what parts of transformation fit this category?*

A: Due to the complexity of the technology stack within any client, we find a strong need for an independent orchestration layer. Keeping the integration layer independent of other systems and separate simplifies the solution complexity and aids future roadmaps.

In cloud programs, pay attention to physical devices when you move from on-premise to cloud. It is ideal for curating a reliable team, especially configuration experts. Still, teams often are outsourced to application vendors, but having a system integrator or in-house experts is a great asset.

ITOrizon offers a variety of pre-built, customizable transformation tools, which you can customize and tailor to your enterprise needs. As a system integrator, ITOrizon's team helps customers implement, manage, and enhance business applications. ITOrizon's team supports a mix of systems; commercial off the shelf software (COTS), custom in-house, striving to leverage customers' technology stack to meet and exceed their business expectations.

Build Supply Chain Resiliency with Digital Transformation

Q: *How has the pandemic revealed shortcomings in supply chains?*

A: The pandemic highlighted the need for a resilient supply chain. The companies that best weathered this crisis were able to make informed decisions and collaborate across their supply chain to minimize the impact of the disruption.

It's clear that adopting an integrated transportation management system delivers consistent ROI and helps create a resilient supply chain.

Q: *What are shippers missing out on by not using an integrated TMS solution?*

A: Companies that still use outdated, siloed systems for operations, transportation, and warehousing management lag behind in decision-making. It takes too long to gather data and respond appropriately. Shipments can't be tracked and diverted as necessary, regardless of the mode. In addition to basic shipment visibility, they're missing out on the benefits of advanced analytics and business intelligence.

They're also spending more on their transportation than they should. Rate data may be hiding in spreadsheets, so the freight doesn't move by the lowest-cost carrier option. They may be paying for the wrong freight class or excess accessorial charges. They could be missing out on load consolidation opportunities or using inefficient routing. It's more challenging to capture payment errors through freight auditing without easily accessible invoicing data.

Q: *How does a TMS deliver value?*

A: A reliable TMS is one piece of a broader intelligent supply chain—one that leverages big data, cloud technologies, and machine learning to unlock optimizations never before available to shippers.

With an integrated TMS, shippers can build incremental value via cost reductions of 0.5% here or 1% there through efficient operations. A TMS helps achieve those savings.

Q: *What factors should shippers look for in an integrated TMS?*

A: An end-to-end solution that manages everything from inbound purchase orders to outbound shipment execution and self-invoicing will make the most significant impact. A full-package solution like our IMPACT TMS takes over vendor compliance through the order book, contractual term compliance and benchmarking, auto-rating, auto-tendering, exception management, tender rejections, spot auctioning, and freight approval.

Look for a TMS with a business intelligence tool that tracks loads from pickup to final delivery and analyzes load cost by lane. IMPACT TMS has an automated spot auction tool that allows the customer to obtain the lowest rate on shipments and secure capacity in a timed environment.

In these unprecedented times, the need for freight optimization is crystal clear. Enterprise shippers need to understand the role a robust TMS plays in transportation management and freight auditing to drive new levels of efficiency and reduced freight spend.

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The Three Trends Driving Supply Chain Efficacy in 2021

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Hannah Testani, chief operating officer at Intelligent Audit, has over a decade of experience helping Fortune 500 companies leverage data across all modes to ship smarter and lower costs.

Change is the one constant in supply chain management. And today, shippers need a flexible, agile, and data-driven process to control freight spend. Given the state of last year's record-breaking e-commerce growth and the uncertainty in the market today, it's essential to know how a few trends will shape the rest of 2021 and build a better supply chain strategy.

Q: *How will the supply chain evolve in terms of agility?*

A: Shippers need an advantage to thrive in 2021. While the industry continues to see the effects of prolonged demands on e-commerce, being nimble and understanding every decision's financial impact becomes a critical factor in saving time and resources. And that ability will drive more efficient and effective decision-making across the global supply chain.

Agility also goes back to the generalized differences in individual datasets. Remember that not all data is built on the same source code. When you consider the variety of supply chain systems available, including TMS, WMS, WES, YMS, ERP, freight forecasting tools, and more, it can be hard to interpret and act on data. As such, it's critical for shippers to have a common data footprint to leverage, which is where normalized data is the beginning of all data-driven processes.

Q: *With the need for increased throughput, what is the most critical factor in using data analytics to create omnichannel supply chains?*

A: 2021 will be the year where single-sourced carrier contracts fall by the wayside to source more capacity. It's not just the capacity to move available shipments; it's the ability to look beyond the typical movements and recognize when things change.

Instead of relying solely on the standard, shippers need a broader picture to find those opportunities in real time. It boils down to a singular fact. With increased supply chain network size, shippers will need a cloud-based, centralized system to collect, normalize, and analyze data, providing a ray of hope for end-to-end transportation optimization.

Q: *What do you think about automated reporting and its use to enable better decision-making?*

A: There was a time when it was a single person's responsibility to manage freight and identify the best spend-savings' opportunities. Again, that worked well when supply chains had a set, clear, and smaller group of suppliers, carriers, and partners. With the rise of third-party marketplaces, contract manufacturers, and transportation service providers' expansion, those days are dead and gone. And an advanced solution that marries both technology and people through business intelligence reporting and automation is the only way forward.

Now, shippers are turning to automated reporting to analyze all savings opportunities presented. That empowers shippers to deliver shipments faster, cheaper, and with fewer exceptions. Technology transforms and simplifies the whole process, allowing enterprises to quantify savings with amazing accuracy and acuity effortlessly.

Outsourcing Helps Close IT Gaps and Meet Milestones

Q: *To meet new and changing shipper demands, what areas of focus should be the highest priorities for tech investment by carriers in 2021?*

A: One challenge we're witnessing right now is the increasing need for carriers to provide more real-time visibility of a shipment's journey. Carriers have begun taking steps to do just that and should continue investing in in-cab technology, API integrations, expanding EDI capabilities, or a variety of all these things.

Q: *What is the single greatest threat to carriers reaching their goals for 2021?*

A: The vulnerability to hackers who gain access to carriers' systems with Malware and Ransomware causes them to cease operations for a period of time. As companies race to keep up with advancements in technology and provide the service customers demand, they must also strengthen security measures to safeguard their business.

Q: *Legacy systems: Are carriers migrating away from them? Why or why not?*

A: Many larger carriers have been slow to move away from legacy systems. This is primarily because a solution didn't exist that was worth the amount of upheaval caused by such a migration.

Many of DDC's carriers have thousands of customers. But not all of their customers are ready or willing to take the leap to API integration. This requires balancing between those customers who embrace innovation and those who are slow to adopt.

Q: *How can carriers overcome the IT talent gap for these older technologies?*

A: Carriers who use legacy systems, like IBM AS400, require programming from an increasingly aging workforce with skills in Report Program Generator (RPG). These skills are hard to come by as younger generations gravitate to the newer languages of Dart, Rust, TypeScript, and Python.

This poses a problem as the older RPG programmers begin to retire. If there is no plan to move away from legacy systems, it is crucial to seek out partners like DDC that can support your needs in any of these languages.

Q: *How can carriers achieve true seamless integration if not everyone in the supply chain invests at the same pace?*

A: Be practical and conquer one challenge at a time. Instead of forcing change on your entire organization, tackle integration by customer, department, or region.

It may also be worthwhile to find strategic partners like DDC who can provide IT support, whether it be for specific short-term projects or for ongoing support to overcome the integration and visibility hurdles you face.

Q: *Can carriers act as change agents for shippers to meet new market demands with IT? If so, how?*

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A: I believe so, but the shippers heavily influence the industry's pace toward advancement. Carriers need to take an inclusive approach that gives shippers the visibility they desire without alienating those who are lagging behind.

By leveraging DDC's expansive range of programming languages and skill levels, carriers can offer a consistent experience regardless of each shipper's individual IT investment.

THOUGHT LEADERS

Converging Order and Logistics Management on One Platform

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Q: *Order management systems relate closely to supply chain management by better matching demand to supply. What are the new developments in OMS?*

A: Today's technology empowers brands to offer a range of diverse, quality products, as well as customizable delivery or omni-channel fulfillment options to their customers. Doing so cost-effectively has always been a challenge. OMS tends to focus on planning or execution, but rarely both. Next gen solutions, however, feature smart capabilities, such as multi-level order, inventory, and logistics management, that finally converge both to help companies balance supply against customer and business demands.

Brands can use one system to automate and optimize orders, inventory, and transportation across dynamic networks. So, no matter what sales channel the order comes from, businesses source from the best possible location and choose the best possible routes to take via the best possible carriers to fulfill it. Flexible systems that continuously optimize process flows in real time are becoming invaluable in consistently ensuring OTIF delivery at lowest possible costs.

Q: *What are the benefits of combining order and transportation management?*

A: The common technology strategy is to accrue as many systems as the capabilities needed. Typically, that means purchasing, an order management system, a transportation management system (TMS), and potentially some multi-modal add-ons and integration layers. A single platform for order and transportation management is a fraction of the total cost of ownership of acquiring several point solutions. Unified technology also simplifies operations and eliminates integration fees and perennial upgrade costs.

Siloed systems also can't optimize across the entire value chain. An OMS might select the "best" inventory and location to fulfill from, but without end-to-end visibility over both order and logistics management, the data it leverages is limited and therefore suboptimal. Without proper TMS integration, the OMS will estimate costs—which is not really optimizing. A supply chain solution that supports the full order lifecycle is a gamechanger, capturing costs at every touch point and optimizing across all flows and functions.

Q: *How does having one integrated view for transport, logistics, and orders foster better collaboration between an enterprise's functional silos?*

A: Most organizations don't realize the extent to which functional silos impact operations and their bottom line. Each business unit, because it is incentivized differently, tends to narrowly focus on its own objectives without considering how those goals impact other sectors. Logistics professionals might focus on the cheapest way to transport orders, while their e-commerce counterparts may push for high product margins.

Unifying systems on a single platform not only offers insight into the bigger picture: How to optimize across silos, rather than within them. How to improve both operational excellence as well as the customer experience. With a single view across all functions, businesses are able to consider priorities other than cost, and holistically factor all requirements and constraints. That's a big deal. Integrated views empower companies to make radical improvements by redefining KPIs and reframing initiatives toward greater objectives.

New Directions in U.S.–Mexico Trade and Logistics

Q: *Why is trade with Mexico so important and where do you see the opportunities?*

A: Mexico is already the United States' second largest trading partner, with two-way trade in goods totaling over $615 billion per year. The recent implementation of the United States-Mexico-Canada Agreement (USMCA), combined with global sourcing strategies resulting in more nearshoring of manufacturing, point to continued growth in U.S.-Mexico trade.

Mexico is also one of Port Tampa Bay's most important trading partners, ranking number one for imports and number two for exports. This covers a diverse mix of cargoes including bulk, break bulk, and containers. Among the commodities we handle and where we see opportunities for growth include fertilizer, chemicals, steel products, furniture, appliances, aggregates, cement, petroleum products, vehicles and auto parts, juice, and fruits and vegetables.

Q: *What are the main issues impacting logistics and the supply chain for U.S.–Mexico trade?*

A: As this trade continues to grow, the overland border crossings have become chokepoints, with importers and exporters increasingly frustrated with congestion and delays. However, thanks to new Gulf of Mexico services offering 3-day transit times to Port Tampa Bay, the all-water option is emerging as a much more efficient supply chain solution.

This is especially the case for trade between Mexico and Florida, but also reaching markets in the Southeast, Northeast, and the Midwest. Work Cat now offers a weekly Brownsville Texas-Port Tampa Bay container-on-barge service using 53-foot containers, which are especially attractive for customers used to receiving deliveries by truck from Monterrey and Northern Mexico.

ZIM has launched a new weekly Altamira-Port Tampa Bay service, the Mexico-Tampa Shuttle, with Kuehne + Nagel as partners on this new service marketed as the Blue Marlin Express.

Q: *What is the port doing to handle this growth?*

A: Together with our terminal operator partner Ports America, we are in the middle of a major expansion to accommodate the continued strong growth of our container business, which was up by 33% over the past 12 months.

The Port recently added 25 acres of additional paved storage, bringing the total to 67 acres, with plans to add another 30 acres. Work has also begun on the addition of a third berth, which will bring the total to more than 4,500 linear feet allowing three large ships to be worked at the same time. Construction will soon begin on a new container gate and the bid process has begun to acquire two additional ship-to-shore gantry cranes.

Another key partner is Port Logistics Refrigerated Services powered by Titan Cold Storage, which runs the new 135,000 SF on-dock refrigerated warehouse, and also provides stevedoring and terminal services, including for the new Work Cat barge service. This state-of-the-art facility is key to serving Florida's grocery/food and beverage sector, which is concentrated along the Tampa Bay/Orlando I-4 Corridor—Florida's Distribution Hub and important for the perishable trade with Mexico.
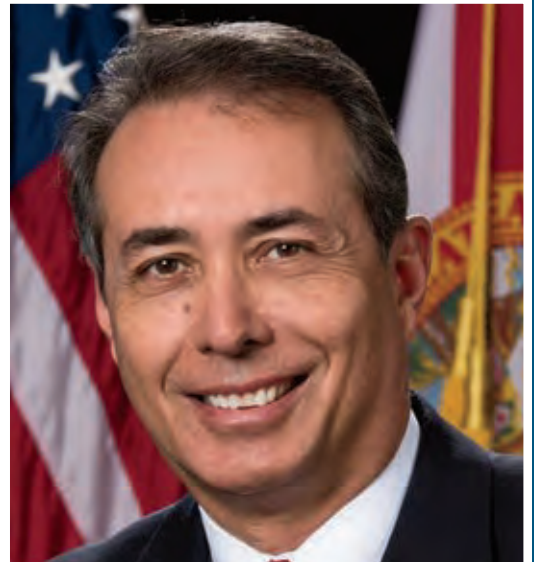
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E-Commerce Trends Drive Automation Initiatives

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Q: *Do you think the adoption of automated systems will increase with the accelerated e-commerce penetration rate?*

A: Based on what we have seen in the past several months, the answer is a resounding yes. Someone a long time ago said, "necessity is the mother of invention." I recently had a 3PL prospect, who is now fast-tracking automation for a new apparel module, tell me, "We've been talking about this for years, it's time to do something."

Where our company and our solutions come into this picture is offering what I call "point automation." As operations grow, managers typically do not have the resources to automate their entire operation. We look at the choke points; for example, getting merchandise off the docks, both coming into and out of the warehouse, as well as actually retrofitting racks with technology to assist picking and putting.

Q: *What e-commerce developments support the increasing use of automation in supply chain operations?*

A: The biggest trend, of course, is the sheer volume increase in e-commerce business. You can look at the growth of the sector in a couple of ways. One is the amount of total retail that e-commerce encompasses, what we call the "e-commerce penetration rate." The second look is the actual percentage growth of the e-commerce sector itself, which is driven by the first metric.

Back in 2009, around the time e-commerce retail really began to take off, e-commerce penetration of the retail sector was just over 5%. By the start of 2020, it had climbed to an astounding 16%.

E-commerce fulfillment operations were scrambling to keep up with demand. Which meant more space, more people, more of everything. Except that finding more people got more and more difficult with the economy at full employment for several years, as did finding more space as capacity tightened.

Then the pandemic hit. Over an eight week period (March-April 2020), e-commerce penetration spiked to 27%. All of a sudden, that mad rush for staff during peak became a yearlong endeavor. For the most part, anyone in the e-commerce fulfillment sector was operating at "peak" all year. Until the 2020 peak season when overall peak volumes were well over double the previous year.

Q: *What are the biggest advantages of automating fulfillment operations?*

A: When operations are small and find themselves growing, adding more of everything typically gets the job done. At some point, however, something's got to give. When an operation doubles in size, the complexity of managing that operation more than doubles. Complexity grows exponentially with volume. The model of doing-more-of-the-same eventually breaks down.

That's where automation comes in. It's a tool set to make your employees more productive and more effective. Instead of bringing on more people, you increase the value of the people you have. Done right, it also increases their morale.

Managing Transitions Effectively to Enhance Project Success

Q: *Why is transition management so critical?*

A: The effectiveness of the transition depends on how well the change is managed. It is essential to have a documented project plan and a dedicated project manager with experience across multiple disciplines.

Their job is to manage the process, hold the team accountable, and develop a formalized communication process ensuring transparency on governance, timelines, data, deliverables, status, dependencies, disruptor/risk identification, and mitigation plans. Effective project management drives collaboration, support, and stakeholder engagement, significantly enhancing project success.

Q: *What are the most significant benefits of effective project management?*

A: It allows you to manage successfully and efficiently. Setting the scope, deliverables, defining stakeholders, timelines, resources, project governance checkpoints, risks, and budget facilitates the most effective use of time and resources.

A structured plan improves collaboration as roles and responsibilities are clearly defined. It also improves customer satisfaction. Customers' expectations must be clearly understood and defined within the project plan to ensure validation and alignment.

Additionally, it mitigates against scope creep. Every project faces risks at some point during the process. Maintaining regular communication updates with stakeholders and clients provides transparency to identify and

address. Simply stated—effective project management ensures no surprises.

Q: *What are the initial steps in managing a network change or software integration?*

A: You need to create a change management plan that clearly outlines the activities and roles that need to be managed. This is a fluid document that explores how the change will impact people, processes, and systems that support the business unit.

The plan needs to identify key stakeholders, document current day-to-day business processes that need to be addressed, training needs of staff, site performance reporting, required IT infrastructure changes, interface needs for other business systems, timelines, efficiencies/inefficiencies, and risks along with "go-live" support.

Q: *What are the challenges in maintaining a fluid project plan?*

A: Projects rarely are executed without disruptions that need to be identified and addressed through plan modifications. While it's the project manager's role to identify risks, they need the support of the entire team to be effective.

Having people who understand the plan and can execute is the biggest challenge. All stakeholders/clients need to be involved in the planning process and encouraged to be vigilant on potential risks. This engagement, combined with frequent project communication processes and status checks, allows risk identification to be more comprehensive and transparent.

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